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January 17, 1995

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M. Street, N.W.
Room 222
Washington, D.C. 20554

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Re: Telephone Company -- Cable Television Cross-Ownership Rules, Sections 63.54-63.58 (CC Docket 87-266)

Amendments of Parts 32, 36, 61, 64, and 69 of the Commission's Rules to Establish and Implement Regulatory Procedures for Video Dialtone Service (RM-8221)

Dear Mr. Caton:

On behalf of Ortel Corporation, please find enclosed an original and four (4) copies of its Reply Comments in response to the Commission's Third Notice of Proposed Rulemaking in the above-referenced proceeding.

If you have any questions or require additional information, please contact me.

Sincerely yours,

Lee D. Hwang
of LATHAM & WATKINS

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Enclosure

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	
Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54-63.58	CC Docket No. 87-266
and	
Amendments of Parts 32, 36, 61, 64, and 69 of the Commission's Rules to Establish and Implement Regulatory Procedures for Video Dialtone Service	RM-8221

REPLY **COMMENTS OF ORTEL CORPORATION**

Ortel Corporation submits these Comments in response to the Commission's Third Notice of Proposed Rulemaking in the above-captioned proceeding.

We would like to draw the Commission's attention to the potentially dangerous and confusing statements made by BroadBand Technologies. They imply that the growth of digital technology mandates the deployment of all-digital networks, and that such networks possess a number of technical advantages over analog or hybrid systems. BBT also claims that analog or hybrid systems would be more costly to expand than all-digital systems. In view of current technology trends, these statements are not supportable.

The key issue for both CATV and telephone companies is to find an effective way to build networks that support the transition from purely analog television signals to purely digital television signals, in a way that minimizes cost and maximizes flexibility.

Video dialtone networks must support the 300 million analog TV tuners in homes across America, and be able to transmit switched digital services when they become available. While digital television technology is rapidly approaching commercial readiness, it will be a few years, probably decades, before digital television equipment largely replaces the installed base of analog equipment, which includes televisions and VCRs. The Commission has a duty to protect the rights of those Americans who wish to receive at least some video dialtone services without paying for the cost of expensive digital coding and decoding.

Hybrid fiber coax ("HFC") networks are widely acknowledged to be the lowest cost networks for providing analog television services as well as switched digital services. In the "last mile" to the home, coaxial cable demonstrates a superior transmission bandwidth compared to twisted pair. RF signals are well suited for the properties of coaxial cable, unlike baseband digital signals. And, in the home, low cost RF tuners are well suited to select either analog channels or digital channels delivered over coaxial cable.

The Commission should note that all current proposals to the FCC for providing video dial tone services rely on RF signals in the last mile, either through HFC technology, or through AT&T's "CAP-16" technology, which is a modified form of digital modulation on RF carriers. The argument that the Fiber to the Curb architectures are purely baseband and not RF is therefore specious.

The comments by BBT imply that there are advantages to building a purely digital network, foregoing the advantages of RF signal transmission and foregoing the advantages of not disenfranchising the existing analog television set owners. In fact, all networks proposed today use RF signal technology for delivering analog video, digital video, and data.

The Commission should not conclude that HFC networks are somehow less capable for providing digital services. Digital modulation technology, in use for more than two decades, provides a flexible, seamless transition from today's analog-only networks to a fully digital network in the future, using low cost HFC networks as the building block. HFC networks actually have a flexibility not offered by Fiber to the Curb architectures. Fiber to the Curb systems use digital switches at the curb to route the signals to the home. This places a limitation on the system if the bandwidth allocations need to be changed. The HFC approach provides direct signal transport to the home without manipulating any data. This allows a great deal of flexibility for configuring the network for future services. The performance and interactive bandwidth of HFC networks can also be easily upgraded incrementally.

By sub-dividing the optical nodes installed today, HFC networks in the future can provide as much interactive bandwidth

as the so-called "switched digital video" networks. The difference is that the investment in the network will be made when the services are ready, not years in advance. Suggestions that "switched digital networks" have a cost advantage over HFC networks with similar performance are not supported by adequate analysis.

Ortel Corporation strongly supports the evolution towards digital television technology and the benefits that implies. The American people will benefit from an open, competitive marketplace for providing communications services. The FCC should adopt policies that encourage the deployment of the most flexible, cost-effective networks that provide analog video signals today, and can evolve naturally to the fully digital network of the future. Such a network is the Hybrid Fiber Coax design.

Respectfully submitted,

ORTEL CORPORATION

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